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First Named Inventor	Chuan Li
Art Unit	1743
Examiner Name	Maureen M. Wallenhorst
Attorney Docket Number	

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## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

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Date	February 15, 2006	Reg. No.	

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Amendments to a continuation of application PROTEIN STANDARD FOR  
ESTIMATING SIZE AND MASS

Applicant Name: Chuan Li

Date: February 15, 2006

Application/Control Number: 10/068,663

Art Unit: 1743

**a.) Introductory Comments**

1. In Examples 1-3, different known amounts of BSA run in separate lanes. For example, 10 micrograms of BSA run in one lane, 5 micrograms of BSA run in another lane, 2 micrograms of BSA run in yet another lane on one gel. The one of ordinary skill in the art will understand that the more different amounts of BSA are used, the more accurate the quantity estimation will be.

The polypeptides in the protein standard will need to run on separate lanes than the different amounts of BSA if their sizes are same or similar to BSA. The polypeptides in the protein standard can run on the same lanes as the different amounts of BSA if their sizes are different than BSA. They may also run on the different lanes too. The polypeptides and BSA will not interfere with each other on staining intensities (quantity estimation) even on the same lane if their sizes are different.

The staining intensities of the polypeptides in the protein standard are compared with the staining intensities of different known amount of BSA to estimate the quantities of polypeptides in the protein standard. The amount of each of the different polypeptides in the protein standard is expressed as equivalent amount of BSA. The amount of ovalbumin in the protein standard of Example 1 is expressed as the same staining intensity of a known amount of BSA such as 5 micrograms. In other words, the true quantity of ovalbumin is not expressed in the protein standard. Many protein assays use known amounts of a known protein as standard. Whenever known amounts of a known protein are used as standard in protein quantification, the quantities of the estimated proteins represent the equivalent amounts of the known protein used. The applicant believes that it is a common knowledge of the one of ordinary skill in the art. Therefore it is not described in the original specification. By following the experimental procedures in

the Examples of the specification as originally filed, one of ordinary skill in the art will be able to make and use the protein standard described in the application. The phrases “The amounts of polypeptides in the protein standard represent the equivalent amounts of BSA used in the quantity estimation.” are added in Examples 1-3 after the protein estimation for explanation of the meaning as directed by the examiner.

Claim 22 is cancelled to avoid containing new matter.

In Claim 30, the word “IgG” is changed to the word “insulin” to avoid new matter. Insulin is described to be used as a protein standard in the DETAILED DESCRIPTION OF THE INVENTION of the specification (second paragraph on page 9).

2. In claim 21, part (d) is deleted to avoid being indefinite and unclear.

In part (b) of claim 21, the phrase “the size of all of the polypeptides covers a range that is separable by a given polyacrylamide gel electrophoresis;” is changed to “the size of all of the polypeptides covers a range that is separable by a given polyacrylamide gel electrophoresis; and” to make proper sense.

In part (c) of claim 21, the phrase “the amounts of all of the polypeptides cover a range that is detectable by a given detection assay; and” is changed to “the amounts of all of the polypeptides cover a range that is detectable by a given detection assay.” to make proper sense.

Claim 23 is cancelled because of deletion of part (d) of claim 21.

In claim 29, the phrase “by comparing the staining intensities of the polypeptides with the staining intensities of the different amounts of the known protein” is added to avoid being indefinite and to make the claim clear.

In claim 30, the phrase “a commonly used quantity standard protein such as” is deleted to avoid being indefinite.

3. In claim 25, the phrase “at least one container means contains the protein standard according to” is changed to “at least one container means containing the protein standard according to” according to the suggestion.

In claim 26, the phrase “the polypeptide in a protein sample” is changed to “a polypeptide in a protein sample” to address antecedent basis.

Claim 32 is cancelled to avoid being indefinite.

In conclusion, the claims of the disclosed invention are changed or cancelled according to the suggestions and to avoid being indefinite and unclear. Therefore Claims 21, 26 and 29 are patentable. Claims 24-25, 27-28 and 30-38 are dependent on Claims 21, 26 and 29. They are provided for fully disclosure of the invention, therefore they are also patentable. If the examiner agrees but does not feel that the present claims are technically adequate, applicant respectfully requests that the examiner write acceptable claims pursuant to MPEP 707.07(j).